

Latest amended claims

S/N 10/019,214

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. - 58. (Canceled)

59. (Currently amended) A mutant strain of *H. pylori*, said mutant strain having deactivated ^{An HP0826} ~~at~~ ^{β-1-4 galactase at} ~~least one gene encoding a glyeosyltransferase galactosyltransferase~~ ^{lower HP0826} involved in the biosynthesis of a *H. pylori* lipopolysaccharide (LPS), said mutant strain failing to produce a wild type O-chain in its LPS. ^{in H. P. 2665 or SS1}

60. (Currently amended) A mutant strain according to claim 59, wherein the glyeosyltransferase galactosyltransferase is involved in the biosynthesis of the O-chain of the LPS, said mutant strain failing to produce a wild type O-chain in its LPS.

61. (Canceled)

62. (Currently Amended) A mutant according to claim 59, wherein the glyeosyltransferase galactosyltransferase is coded by open reading frame 0826 from *H. pylori* strain 26695 or SS1.

63. (Withdrawn) A vaccine composition comprising an antigen derived from a mutant strain of *H. pylori* according to claim 59.

64. (Withdrawn) A vaccine composition according to claim 63, wherein the antigen is an at least partially purified lipopolysaccharide.

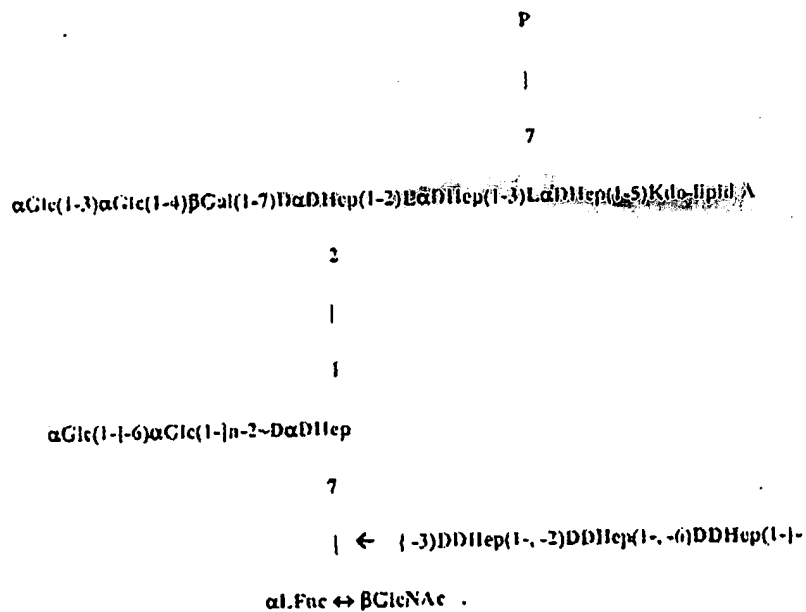
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65. (Withdrawn) A vaccine composition according to claim 64, wherein the antigen is conjugated to a protein.

66. (Withdrawn) A live attenuated vaccine composition comprising a mutant strain of *H. pylori* according to claim 59.

67. - 70. (Canceled)

71. (Previously presented) A mutant according to claim 62, producing LPS molecule with the structure:



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72. (New) A mutant according to claim 62, producing LPS molecule with the structure:

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 $\alpha\text{Glc}(1-3)\alpha\text{Glc}(1-4)\beta\text{Gal}(1-7)\text{D}\alpha\text{DHep}(1-2)\text{L}\alpha\text{DHep}(1-3)\text{L}\alpha\text{DHep}(1-5)\text{Kdo-lipid A}$

2

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1

 $\text{D}\alpha\text{DHep}$

7

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 $\alpha\text{LFuc} \leftrightarrow \beta\text{GlcNAc}$